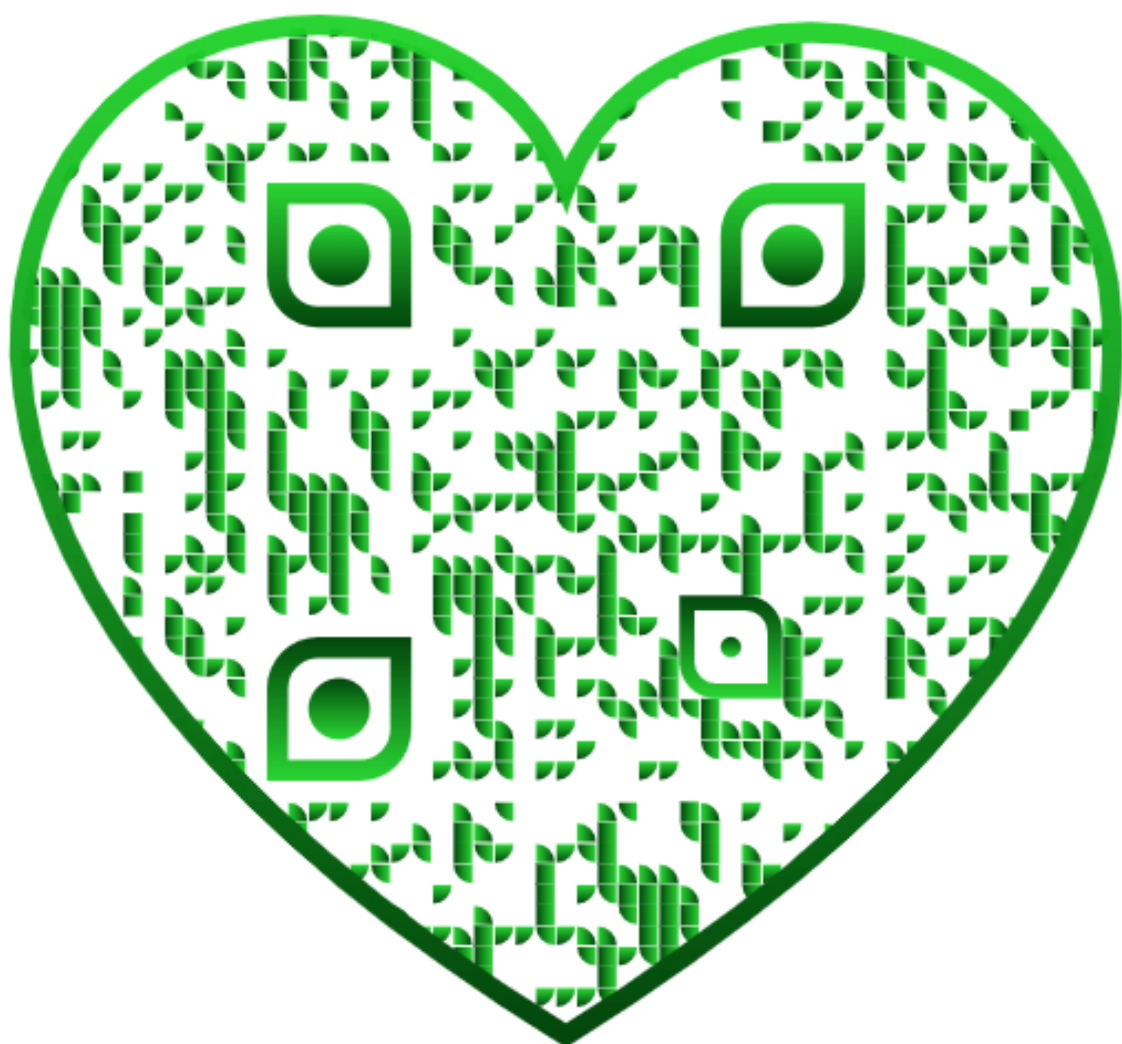


common OSCE cases

important discussion notes

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thyroid

INVESTIGATIONS:

1) Thyroid function test (TFT):

To measure serum T3, T4 & TSH

- Hyperthyroidism: ↓TSH and ↑T3 & T4
- Hypothyroidism: ↑TSH and ↓T3 & T4.
- Sub-clinical hyperthyroidism: normal T3 & T4 while ↓TSH
- Sub-clinical hypothyroidism: normal T3 & T4 while ↑TSH.

2) Thyroid auto-antibodies:

- Grave's disease: long-acting thyroid stimulating antibodies (LATs)

Hashimoto thyroiditis: anti-TPO antibodies.

3) Thyroid imaging:

- ❖ Chest and thoracic inlet X-rays: to confirm retrosternal goiter and if there's tracheal deviation and compression.

- ❖ Ultrasound (US):

1. Differentiates solid from cystic masses
2. Guides fine-needle aspiration
3. Differentiate between a solitary nodule and a dominant nodule in multinodular goiter.

- ❖ Isotope scanning:

- Uptake of either radiolabelled iodine (^{123}I) or technetium $^{99\text{m}}\text{Tc}$ will demonstrate the distribution of activity in the whole gland

4) Fine-needle aspiration cytology (FNAC)

- It's the investigation of choice in discrete (nodular) thyroid swellings.

- To differentiate between malignant & benign nodules.
- Usually surgery decision is based on FNAC results, except

in case that FNAC shows follicular cells (it can't differentiate between follicular adenoma and follicular carcinoma) so a true-cut biopsy here is needed (in biopsy

if there's invasion of the basement membrane then it is

carcinoma, if there's no invasion then it's adenoma).

5) Biopsy: to differentiate between follicular adenoma and carcinoma, also

between lymphoma and anaplastic carcinoma.

• Preoperative investigations:

- TFT and thyroid antibodies.
- Thoracic inlet CXR & lateral cervical X-ray: to detect if there's retro-sternal extension of the thyroid or tracheal deviation and compression. Retro-sternal extension may mandate sternotomy. In case of tracheal compression removing the thyroid may lead to tracheomalacia so a tracheostomy tube might be needed.

- Serum Calcium estimation: because it might drop after the surgery due to either accidental removal of the parathyroid gland or injury to the blood supply of the parathyroid gland.

- Indirect laryngoscopy: to assess the movement of the vocal cords (medico-legal importance)

- Isotope scan: is necessary in case of toxic nodular goiter if total thyroidectomy is not planned.

• Complications of surgery:

1) Immediate complications:

- a. Bleeding, usually from the superior thyroid artery

- b. Injury to surrounding structures:

- Recurrent laryngeal nerve (RLN): hoarseness of voice

- External branch of the superior laryngeal nerve: weak voice

- Trachea, esophagus, carotid sheath, ... etc

- c. Thyrotoxic crisis (storm): severe hyperthyroidism;

agitation, tachycardia & palpitation, dehydration and

hyperthermia. It's an emergency.

- Management:

- ✓ Admit to ICU

- ✓ IV Rehydration

- ✓ Rectal carbimazole

- ✓ IV propranolol

- ✓ Cooling

- ✓ Lugole's iodine

2) Early complications:

- Respiratory distress; patients presents with stridor 4-6 hours post-operatively, DDx:
 - Hematoma, open the wound immediately (don't wait to take the patient to the theater) and evacuate the hematoma
 - Tracheomalacia, put a tracheostomy tube
 - Bilateral injury to recurrent laryngeal nerves.
- Hypocalcemia;
- 3) **Late** complications:
 - Hypothyroidism
 - Recurrence; if the gland is not removed properly and as in case of subtotal thyroidectomy.
 - Hypertrophic or keloid scar; if incision overlies the sternum and in dark-skinned people.
 - Indications of surgery:
 - 1) Compression symptoms; stridor, dyspnea, hoarseness of voice, dysphagia (never mention dysphagia first)
 - 2) Retrosternal extension
 - 3) Suspicion of cancer (hard, irregular, solid nodule, lymph node, weight loss... etc)
 - 4) Cosmetic
 - Options of surgery:
 1. Total thyroidectomy + thyroxine replacement for life. Do in case of carcinoma or toxicity signs.
 2. Subtotal thyroidectomy (2 subtotal lobectomy + isthmusectomy): is obsolete now due to the high recurrence rate
 3. Near - total thyroidectomy (Dunhill operation): the best option (total lobectomy + isthmusectomy + subtotal lobectomy). Do in case of pressure symptoms or cosmetic

The Breast

Always remember: in any patient who presents with a breast lump or other breast symptoms suspicious of cancer, the diagnosis should be made by Triple assessment which includes: clinical assessment (Hx & Ex), radiological imaging and samples taken for histopathological analysis. The positive predictive value of this combination should exceed 99.9%.

Discharge from the nipple:

- Discharge can occur from one or more lactiferous ducts.
- Investigations: Triple assessment
- Management:
 - ☺ Microdochetomy (take out single duct).
- Indications:
 1. Bloody discharge
 2. Persistent discharge
- ☺ Core excision of the major ducts (Hadfield operation, subareolar resection): the entire major duct system is excised for histological examination.
- Indications:
 1. The duct of origin of nipple bleeding is uncertain
 2. Bleeding or discharge from multiple ducts
 3. Recurrence
 4. Mammary duct fistula.

❖ Acute bacterial mastitis (lactational mastitis):

- Treatment:
 1. Antibiotics: flucloxacillin or co-amoxiclav
 2. Support of the breast, helps lessen pain and prevents edema
 3. Local heat (warm fomentation) and local analgesia
 4. In case of abscess formation, it's treated by incision and drainage under general anesthesia.
- If an antibiotic is used in the presence of undrained pus an antibioma may form. This is a large, sterile, brawny edematous swelling that takes several weeks to resolve.

o Mastalgia:

- Reassurance: use pain chart if unsure if cyclical or non-cyclical. Also allows time for reassurance to become active.
- Adequate support: wearing firm bra during the day and soft bra at night.
- Avoid caffeine
- Primrose oil one capsule every night. Better effect in women over 40 years old than in younger women.
- NSAIDs

DDx of tender breast:

1. Cyclical mastalgia
2. Mondor's disease (thrombophlebitis of the superficial veins of the breast and anterior chest wall)
3. Tietz syndrome (benign inflammation of one or more of the costal cartilages)

Carcinoma of the breast

❖ Indications of chemotherapy:

1. LN +ve
2. Triple negative tumors
3. HER2/neu +ve
4. Large tumors
5. Stage III & IV
6. Metastases
7. Lymphovascular invasion

Muscle repair using non-absorbable suture (nylon, protein)

to stimulate fibrous tissue formation

3- Hernioplasty:

- Herniotomy + mesh repair (synthetic material = polypropylene)

❖ Complications of hernia repair:

• Immediate : bleeding

• Early :

- infection " after 72 hrs

- Hematoma : with inguinal hernia, it appear in the scrotum

scrotal
hematoma" which may progress to abscess
ilio-inguinal nerve injury → numbness in abdomen and thigh
ng

• Late:

- Testis atrophy: due to injury to testicular artery

HERNIA

History Of The Hernia:

- Reducible
- Irreducible
- Obstructed hernia : presents with colicky pain
- Strangulated hernia : present with continuous pain due to ischemia , on examination it is tender and tense. Veins will be obstructed at first → leading to edema → increase pressure → arterial flow will be impaired → ischemia.

❖ Complications:

- 1- Irreducibility
- 4- inflammation
- 2- Obstruction
- 5- torsion of the omentum
- 3- Strangulation > ischemia

❖ Surgical treatment of hernia:

1- Herniotomy:

- Open the sac, inspect the contents
- Reduction of the contents
- Excision of the sac and close the defect

2- Herniorrhaphy:

Achalasia of the esophagus:

Clinical features:

1. Dysphagia of BOTH solids and liquids. A long - standing dysphagia for both solids and liquids suggests a functional (as in achalasia) rather than mechanical cause of the dysphagia.

2. Vague chest pain, due to esophageal spasm

3. Nocturnal cough, due to nocturnal pulmonary aspiration of the esophageal contents.

4. Heartburn does not occur because the closed LOS prevents

gastro - esophageal reflux.

• Investigations:

Esophageal manometry: the gold standard test for achalasia. It confirms the high-pressure, non-relaxing LOS with poor contractility of the esophageal body (atonic esophagus)

Barium swallow: shows gross dilatation of the proximal esophagus with smooth tapered narrowing of the lower esophagus (typical bird's peak appearance).

Endoscopy: should always be done, why? Because carcinoma of the cardia can mimic the presentation and radiological & manometric features of achalasia (pseudo-achalasia)

• Treatment:

• Heller's myotomy + anti-reflux procedure (e.g. partial fundoplication), it's extremely effective.

• Balloon dilatation

• Endoscopically directed injection of botulinum toxin

Diffuse esophageal spasm:

- "Arrhythmia of the esophagus"
- Chest pain due to sudden contractures (DDx: angina)
- Corkscrew appearance on barium swallow
- On manometry: abnormal contractures (may be normal during episodes).

2) Pharyngeal pouch (esophageal diverticulae):

- Pharyngeal pouch is a posterior-medial herniation through Killian's dehiscence (the triangular area in the wall of the pharynx between the thyropharyngeus and cricopharyngeus muscles)
- More common in elderly men
- Symptoms:
 - Dysphagia is the prominent feature. It occurs after a few swallow as the pouch fills with food
 - Gurgling sound on swallowing
 - Halitosis
- Regurgitation at night when patient is recumbent, may cause cough and aspiration pneumonia.
- Treatment: surgical excision of the pouch & cricopharyngeal myotomy.

Carcinoma of the esophagus:

Clinical features:

- 1) Dysphagia, progressive and painless, initially for solids then liquids.
 - 2) Weight loss, is often extreme.
 - 3) Chest pain or hoarseness suggest mediastinal invasion
 - 4) Fistulation between the esophagus and the trachea or bronchial tree leads to coughing after swallowing, pneumonia and pleural effusion..
- Investigations:
 - Upper GI endoscopy with cytology and biopsy is the investigation of choice.
 - Barium swallow: 'shouldered' stricture.
 - Treatment:
 - Surgery: the treatment of choice if the tumor is operable.
 - Palliative care: when the disease is extensive and inoperable (70% of cases)

STOMACH

Clinical Features:

✓ Duodenal ulcer

Hunger pain relieved by food

Anterior duodenal ulcer tend to perforate, while the posterior duodenal ulcer tends to bleed because the gastroduodenal artery lies behind the duodenum.

✓ Gastric ulcer:

Pain after meals relieved by vomiting

Wt loss because the patients tends to avoid eating due to pain

✓ Other features:

- ✓ Nausea and vomiting
- ✓ Iron deficiency anemia
- ✓ Epigastric tenderness
- ✓ Haematemesis or melena

Diagnosis of peptic ulcer:

- ✓ General investigations
- ✓ Stool Ag test
- ✓ Urea breath test
- ✓ Serum gastrin level " if Zollinger-Ellison is suspected"
- ✓ OGD and biopsy → diagnostic

Management :

- ✓ Life style modification
- ✓ Medical treatment:
 - ✓ Anti-acids ; relieve the pain but are of limited value
 - ✓ Proton pump inhibitors; reduce acid secretions
 - ✓ Eradication therapy for H.pylori ; Either triple therapy " PPI + clarithromycin + metronidazole or amoxicillin"
 - Or Quadruple therapy "PPI+ bismuth + tetracycline + metro"
- ✓ Surgery : indicated in
- ✓ Failure of medical treatment

Gastric Carcinoma:

Signs :

- ✓ Early satiety → early sign
- ✓ Epigastric pain + alarm symptoms
- ✓ Lymphadenopathy :
 - Supraclavicular: Virchow node
 - Para-umbilical : Sister Mary Joseph

- Macroscopic types of the cancer;

Management :

- ✓ If the patient presents early treatment will be curative surgery

Other causes of Hematemesis:

- ✓ Oesophageal varices → Portal HTN
- ✓ Mallory-weiss syndrome
- ✓ Gastric carcinoma
- ✓ Portal hypertension gastropathy
- ✓ Aorto-enteric Fistula
- ✓ Bleeding disorders
- ✓ Drugs : steroids, NSAID, Anticoagulants
- Management of hematemesis:
 - ✓ ABC
 - ✓ Two wide bore cannula
 - Blood sample for :CBC, Blood grouping and cross-matching, coagulation profile
 - Iv fluids → Ringer lactate
 - ✓ Monitor the vital signs : pulse, BP, CVP, UOP
 - ✓ NG-tube :
 - to remove blood from the stomach ; if blood remain in the stomach this will result in high ammonia production which will lead to encephalopathy
 - and to estimate the blood loss
 - ✓ to stop the bleeding :
 - Endoscopy :
 - Sclerotherapy
 - Rubber band ligation
 - TIPS: Trans-jugular -Intra-hepatic Porto-systemic shunt
 - Sengstaken tube + vasopressin
 - complications of Sengstaken tube:
 - ✓ Aspiration pneumonia "the most common"
 - ✓ Mucosal necrosis
 - ✓ Prophylaxis : give B-Blockers
 - ✓ Indications for surgical intervention:
 - ✓ Massive uncontrolled bleeding
 - ✓ Re-bleeding
 - ✓ More than 4 units bleed in 24hrs unless the cause is varices.

Acute diverticulitis presents as:

- Severe abdominal pain in the left iliac fossa
- Guarding , rigidity, and tenderness
- Palpable sigmoid colon
- Rebound tenderness

It is similar to acute appendicitis so it called " Left-sided appendicitis"

✓ Diagnosis:

US

CT scan

Barium enema " saw-teeth appearance"

✓ Management:

Mainly conservative

- Admission , NPO
- NG Tube
- Analgesia
- Antibiotics → cephalosporin + flagyl
- IV fluids
- Monitoring

✓ Complications:

1- Perforation:

- Release of feces will lead to fecal peritonitis
- Mortality is very high
- Management:

Laparotomy → peritoneal lavage → resect the area of perforation and do colostomy

2- Chronic inflammation : leads to formation of fistula

- External fistula
- Colo-vesical fistula: between the colon and urinary bladder , patient will complain of :

3- Massive rectal bleeding:

Diverticulosis is the most common cause of massive rectal bleeding in adults.

Diverticular disease + GERD + Gallstones = Saint's triad

1. Crohns disease:

- Mouth aphthus ulcer
- Esophagus stricture
- Intestine commonest site ;(ulcer, stricture, granuloma)
- Large bowel....rectal bleeding
- Anus fistula, abcess.

❖ Colo -rectal cancer:

Presentation:

depends on the side and type of cancer

✓ left sided tumors :

- Intestinal obstruction,

Change in bowel habits ,

- Rarely fresh rectal bleeding mixed with stool

✓ Right sided tumors;

- Melena

- Iron deficiency anemia in elderly.

✓ Rectal tumors;

-Rectal bleeding

-tinsmus

-in advance stages ;mass and intestinal obstruction.

• Examinations:

General : pallor ,Virchow node , jaundice, inguinal lymph nodes

Abdominal : distention ,palpable mass , palpable liver, Ascites

PR: may feel mass , lymph node, blood.

Investigations;

1. General investigations ; look for anemia

2. Tumor markers ; prognostic rather than diagnostic

3. Barium enema ;(contrast radiograph) ; apple core sign

4. PR→ sigmoidoscopy → colonoscopy ---→ biopsy

(* Note ; synchronized tumors 5% of cases → arise at same time , while

metachronized tumors arise at different times)

5. LFT , abdominal US , CT, IVU ,CXR for mets .

6. MRI / endorectal US ; to assess depth of invasion.

• Treatment;

Duck A& B aim of ttt is curative .

✓ Surgery:

Intestinal obstruction

Clinical picture :-

1.Colicky abdominal pain "on and off pain"

2. Vomiting

3. Absolute constipation

4.distension

- the proximal part of the intestine become dilated by food, gas , secretions and fluid sequestration and the distal part is collapsed .

-Orders of symptoms differs :-

•small bowel :- start with vomiting

"ileo-vomiting" pain around the umbilicus (because bowel is part of the midgut) pic

Umbilical pain, pt. Continue passing stool , constipation occurs later .

•large bowel :- start with early constipation, distension colicky lower abdominal pain (because it's part of hindgut) then vomiting lately.

- in large bowel distension is obvious .

Complications of intestinal

obstruction :-

1. Hypo-volumic shock .

2. Strangulation and ischemia.

3. Electrolytes disturbances (mainly hyperkalemia) and renal failure

4. Septic shock and peritonitis .

❖ Diagnosis :-

Mainly depends on : abdominal X rays "erect and supine"

-supine =air (gas) - erect= air fluid levels .

Acute Appendicitis

Tx: resuscitation of acute Abdomin

=appeniciectoomy

Treatment of acute appendicitis is acute appendiciectomy

US only in females to exclude gyn. Conditions (if the female is pregnant & th e inflamed appendix close to the uterus → can induce preterm labor)

biliary diseases

complication of acute cholecystitis are: Empyema, biliary peritonitis, mucocele, chronic cholecystitis, impacted stone

✓ SURGERY "Cholecystectomy"

Can be either open or laparoscopic cholecystectomy

Complication of Cholecystectomy:

✓ Common complications

✓ Injury to common bile duct → stricture → leading to sclerosing

cholangitis which will lead to liver cirrhosis (the most serious

complication)

- Jaundice after surgery is explained by :

✓ Injury to common bile duct

✓ Retained stone

INVESTIGATION

1- General :

✓ CBC

Coagulation profile

2- LFT:

3- Abdominal US "initial test but NOT confirmative

4- ERCP " Endoscopic Retrograde Cholangio-pancreatography":

✓ "Diagnostic Role

Sebaceous cyst :

- Obstruction of the sebaceous duct of the gland.

- It is the only gland that secret by holocrine .

Result in acne → if prolonged it causes cyst

- Attach to the skin (from epiderms)

- Commonly in axilla , face , scrotum , scalp .

- Multiple sebaceous cyst is called garnar syndrome.

- On examination:

Positive cross fluctuation test

Punctum (spot) present in 50% of patients .

Sebum become dry (sebaceous horn)

- Treatment : excision

hemorrhoids

Examination:

-general, abdomen, PR

-proctoscopy

- Sigmoidoscopy: to exclude other lesion

-colonoscopy: if there is any doubt

Complication:

-strangulation (painful)

-infection, abscess formation

Treatment:

-Grad 1, 2: -conservative management, high fiber diet, laxative

- Sclerotherapy: injection of STDs (Na tetraethyl sulphat)

-band ligation

Grad 3, 4:

-surgical haemorrhoidectomy

Complication of haemorrhoidectomy:

1-stricture and anal stenosis

2-acute retention of urine

3-haemorrhage and infection

DD of painful anal condition:

1-anal fissure 2-anal abscess

3-thrombosed hemorrhoids

4. Lipoma :

- tumor of the fat , it may be subcutaneous (in skin) subperiosteal (bone) sub meningeal or sub mucus .
- common in females.
- common site is the back
- may be multiple as in dercum's syndrome (resembles neurofibromatosis , painless) .
- usually soft lobulated lump that is shagreened edge, painful and tender in examination.
- treatment: surgical excision.

5. Ganglion :

Swelling that arise from the tendon sheath and containing synovial

fluid.

It is A cyst (positive fluctuation test) (and positive transillumination test)

Wrist is the common site

Treatment: is by surgical excision in blood less field by using tourniquet(09 mins is the maximum time) under general anesthesia

Urology

❖ Stones:

Types of stones :

1\calcium oxalate stone (most common) its sharp so cause hematuria

2\calcium phosphate stone

3\uric acid stone

4\cysteine stone

All stone are radio opaque except uric acid stone is radio lucent in x ray(so do NU or US)

➤ Clinical symptoms of stone:

1/Asymptomatic

2/Episodes of loin pain

3/Hematuria

4/If stone obstruct renal pelvis or ureter → colicky pain(on and off pain radiated from loin to groin)

➤ Investigation :

1/xray K U B

2/Ultra sound

3/CT K U B (better; give you size and density of stone)

➤ Treatment:

- Depends on the site, size and density of stone:

1/if it smaller than 0.5 give diuretics and increase the amount of water consumption daily if there is pain give analgesia

2/if it 0.5cm to 2cm give patient shock waves to destroy the stone by using ESWL

(Extracorporeal shockwave lithotripsy) and put double J stent

3/ If the stone is >2cm : do

surgery (- lithotomy)

Kidney : nephrolithotomy

Pelvis: pyelolithotomy

Ureter: Uretero-lithotomy

Bladder: vesico-lithotomy

✓ percutaneous nephrolithotomy

Renal cancer

If there is old age patient with varicocele in the left side mainly (abnormal dilation of testes veins) this suggests renal cancer

Triad of : loin pain , loin mass and painless total hematuria.

➤ Investigation

- Ultrasound (capsulated)

- CT

➤ Management

Radical

nephroureterectomy

y +/-

Chemotherapy

Urine retention:

➤ Elderly male:

1/BPH

2/CA prostate

3/urethral stricture

➤ Young male:

1/urethral stricture

2/impacted urethral stone

3/ neurogenic (e.g cord injury)

If female:

Commonly neurogenic bladder , stone or cord injury

➤ child:

1/posterior urethral valve

2/phymosis and paraphymosis

Usually predisposed by constipation, pain, anaesthesia ,surgery or UTI

➤ Clinically: bladder is distended and dull on

percussion in acute and

chronic retention but there is pain and tenderness in acute retention

➤ Treatment:

✓ Treat underlying cause

✓ catheterization:

❖ Benign prostatic hyperplasia :

It is arise from medial zone

➤ Patient will suffer from :

1- lower urinary tract symptoms

2- urine retention (acute or chronic)

3- chronic renal failure

O/E : bladder palpable and dull percussion

When you do PR you will found:

Prostate enlarge ,smooth , midline sulcus, you can reach upper

border and move mucosa.

➤ Investigation:

- Trans-rectal US

- PSA(normal less than 0.4ng/dl if very high do trans rectal US guided biopsy)

➤ Treatment:

✓ Medical:

1- Alpha blocker

2- 5 alpha reductase inhibitors (finasteride).

✓ Surgical:

- Indications for surgery: 1- recurrent urine retention

2- patient with hydronephrosis 3- if medical treatment failed

4- if the patient having lower urinary tract symptoms

5- hematuria 6- renal impairment

➤ Varicocele:

- Dilated veins around the testes .

- Mainly occur in the left side because the left testicular vein is drain in the left renal vein.

- Palpable as bag of worms

- Disappeared with lying down and appear with standing

• Varicocele have grades :

1- grade 1 varicocele: the dilated vein not palpable but

detected with doppler

2- grade 2: the dilated vein is palpable when the patient

is standing only,

3- grade 3: palpable even when the patient is laying flat

- The main problem in varicocele is pain it is very painful the other problem is subfertility due to increase the temperature of the both testes.

- You have to do semen analysis: if there is risk of subfertility do surgery if not conservative management with analgesia and scrotal elevation

➤ Hydrocele:

- Abnormal fluid accumulation in tunica vaginalis.

- O/E : cant feel the testis

Positive fluctuation test

Positive transillumination

❖ Congenital anomalies of the testes:

➤ D.D of empty scrotum:

- 1- Undescended testes
- 2- Ectopic testes
- 3- Rextectil testes
- 4- Testicular agenesis

➤ Undescended testes:

- Testes arrested in the pathway of the descend in:

- 1- Posterior Abdominal wall
- 2- Deep inguinal ring
- 3- inguinal canal
- 4- Superficial inguinal ring

- The ideal investigation to search for testes is laparoscopy

➤ Treatment:

- Orchiopexy, if you find testis unhealthy do orchiectomy.

➤ Complications of undescended testes:

- 1- precancerous condition
- 2- infertility.

3- trauma and hemorrhage

- If testes are undescended bilateral >> cryptorchidism (you need to do karyotyping)

Acute limb ischemia:

6 Ps:

- 1-pain (continuous) 2-parasthesia
- 3-paralysis 4-perishing (cold)
- 5-pulsless (most important)

6-pallor

Work up for acute limb ischemia:

❖ You have 6 hours from the start of the symptoms to save the leg or it will end up in amputation

1- BP measurement and cardiovascular examination

2- Abdominal examination for AAA

3-

4- IV unfractionated heparin (rapid onset of action) 100 unit/kg

5- Doppler US or angiography

6- Emergency embolectomy by Fogarty catheter.

Chronic limb ischemia

old 2-smoker

3-HTN 4-DM

5-hyperlipidemia 6-alcoholic

7-lack of exercise 8-family history

Work up for chronic limb ischemia:

1- CVS + Abdominal examination (HTN + AAA)

2- Limb examination (look for the above signs)

3- Investigations: general

1-CBC 2-RFT 3-LFT

4-lipid profile 5-coagulation profile

6-ECG CXR ECHO

7-abdominal US for AAA

ABPI = systolic ankle pressure/ brachial pressure

Duplex scan (screen US) to see the blood flow

3- the gold standard investigation is Angiography

Amputation :

✓ Level of amputation:

1-above knee 2-gritty strokes through knee

3-below knee 4-through ankle (Symes)
5-toes amputation (V shape amputation/ Ray amputation)

✓ Indications for amputation:

- Dead limb: dry gangrene

- Deadly limb: the life of the patient may be threatened if the limb is retained.

Severe cellulitis

• Necrotizing fasciitis

• Bone tumor

Complications of amputation:

1- Complications due to operation : pain, infection,

bleeding, hematoma

2- Contracture in the joints

3- Psychological complications: depression

4- Complications of immobilization

5- Phantom limb: persistent pain sensation in the

amputated limb

6- neuroma: healing of nerve endings by fibrosis.

7- flap necrosis

Aneurysm:

Abnormal dilatation of an artery more than double its diameter

(e.g.: Aorta normal diameter 2cm
AAA is when the diameter >4cm)

✓ Causes:

1-atherosclerosis 2-congenital

3-infections (syphilis)

Abdominal aortic aneurysm AAA:

If diameter >4cm, but asymptomatic. Follow up every 6 months using Abdominal US.

✓ Indications for surgery:

A- if symptoms developed

1-pain 2-urinary frequency due to pressure on bladder

3-thrombosis & embolization (acute limb ischemia)

4-impending rupture

- If the aneurysm ruptured mortality is 50%

- If the aneurysm not ruptured mortality is 5%

B- diameter >5.5 cm even without complications

C- dilatation of >1cm per year

✓ Surgeries: Open surgery or Stent

- Open surgery:

- Clamp the aorta and put Dacron graft inside the aorta then cover the graft with aorta (aneurysm sac), to avoid aorto-enteric fistula (present with hematemesis)

Varicose veins:

✓ Investigations:

1- doppler

2- duplex

3- venography or varicography

✓ Treatment:

1- stocking grade 2 (grade 1 for cosmetic surgery, grade 3 for lymphedema)

2- sclerotherapy injection of STDs (sodium tetradethyl sulfate)

3- surgery: ligation of the valve - evulsions of the perforators - stripping of the superficial veins

Deep vein thrombosis

DVT:

DDx:

1-cellulitis

2-ruptured Baker's cyst

Diagnosis:

duplex or venography (gold standard is Duplex)
D-dimer (first)

➤ Complications:

1- Pulmonary embolism

Management:

1- unfractionated bolus IV heparin 80 units/kg and maintenance 15 units/kg

2- change to warfarin if INR 2-3 for at least 6 months

3- if recurrence warfarin for life, do screening for hypercoagulability

- followup: APPT, INR

Work up for diabetic septic foot:

1- Assess the patient general condition:

CVS, Renal

2- General investigations:

- CBC

- RFT

- Random blood glucose

- HBA1c

3- Admission, start insulin, dietary support, blood transfusion if needed

4- treat the comorbidities

➤ Causes:

A- Neuropathic

- In the sole and pressure areas.

- Signs: numbness, loss of sensation, and Charcot joint deformity.

B- Ischemic

- Painful, white base ulcer in the lateral malleolus.

- Signs are: pale, hairless, absent pulse, callus formation, brittle nails and ABPI <0.9

➤ Management according to the cause:

If neuropathic:

- Foot care (inspection and daily cleaning, nails cutting)

- Gabapentin for pain

- Vitamin B12

If ischemic:

- Aspirin / clopidogril + statin

- Duplex or angiography and consult vascular surgeon to perform balloon dilatation angioplasty or bypass graft

For infections:

- Swab for culture and sensitivity

- Give broad spectrum antibiotics

Cellulitis :

Caused by streptococci (most commonly) followed by staphylococci .

C/F : swelling, pain , tenderness ,redness, hotness .

(D.D : DVT ,

abscess-> try to aspirate if pus then it is abscess,

bone inflammation ->

osteomyelitis)

> Management:

Antibiotics + elevation of the leg + monitoring (limb circumference) .

Fistula:

-may due TB, cancer, radiation, crohn, IBD

Type:

-Trans-sphincteric

-Inter -sphincteric

-Extra-sphincteric

Presentation:

-opening near anal opening

-discharging pus, blood, mucous, and fecal material

Investigation:

-fistulogram: injection of dye x-ray

-MRI

-endo anal US

Treatment:

-fistulotomy

-fistulectomy

Lower GI bleeding (massive)

1-diverticular disease :most common cause

2-upper GI bleeding

3-angiodysplasia

4-IBD

How to manage:

1-resuscitation:ABC

-radiological image

3-upper or lower GI endoscopy

fight



